PERMIT NO. 2759-313-0072-S-08-0
ISSUANCE DATE:

GEORGIA
DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL PROTECTION DIVISION

Air Quality Permit

In accordance with the provisions of the Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq and the Rules, Chapter 391-3-1, adopted pursuant to and in effect under that Act,

Facility Name: **Flexstar Packaging, Inc.**

Facility Address: **1902 Kimberly Park Drive**
Dalton, Georgia 30720 (Whitfield County)

Mailing Address: **1902 Kimberly Park Drive**
Dalton, Georgia 30720

Facility AIRS Number: **04-13-313-00072**

is issued a Permit for the following:

Operation of a graphic arts facility and for removal of Press P5 and Catalytic Oxidizer I01, addition of Press P2, use of RTO1 to control all presses and allowing the flexible use of RTO1.

This Permit is issued for the purpose of establishing practically enforceable emission limitations such that the facility will not be considered a major source with respect to Title V of the Clean Air Act Amendments of 1990.

This Permit is conditioned upon compliance with all provisions of The Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq, the Rules, Chapter 391-3-1, adopted and in effect under that Act, or any other condition of this Permit.

This Permit may be subject to revocation, suspension, modification or amendment by the Director for cause including evidence of noncompliance with any of the above; or for any misrepresentation made in Application No. 28668 dated December 6, 2022; any other applications upon which this Permit is based; supporting data entered therein or attached thereto; or any subsequent submittals or supporting data; or for any alterations affecting the emissions from this source.

This Permit is further subject to and conditioned upon the terms, conditions, limitations, standards, or schedules contained in or specified on the attached **9** pages.

STATE OF GEORGIA
CONSTITUTION
WISDOM JUSTICE MODERATION
1776

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Richard E. Dunn, Director
Environmental Protection Division

1. General Requirements

1.1 At all times, including periods of startup, shutdown, and malfunction, the Permittee shall maintain and operate this source, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection or surveillance of the source.

1.2 The Permittee shall not build, erect, install or use any article, machine, equipment or process the use of which conceals an emission which would otherwise constitute a violation of an applicable emission standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard that is based on the concentration of a pollutant in the gases discharged into the atmosphere.

1.3 The Permittee shall submit a Georgia Air Quality Permit application to the Division prior to the commencement of any modification, as defined in 391-3-1-.01(pp), which may result in air pollution and which is not exempt under 391-3-1-.03(6). Such application shall be submitted sufficiently in advance of any critical date involved to allow adequate time for review, discussion, or revision of plans, if necessary. The application shall include, but not be limited to, information describing the precise nature of the change, modifications to any emission control system, production capacity and pollutant emission rates of the plant before and after the change, and the anticipated completion date of the change.

1.4 Unless otherwise specified, all records required to be maintained by this Permit shall be recorded in a permanent form suitable for inspection and submission to the Division and shall be retained for at least five (5) years following the date of entry.

1.5 In cases where conditions of this Permit conflict with each other for any particular source or operation, the most stringent condition shall prevail.

2. Allowable Emissions

2.1 The Permittee shall not discharge, or cause the discharge into the atmosphere, from the entire facility, volatile organic compounds (VOC) in an amount equal to or exceeding 100 tons during any twelve consecutive month period.
[Title V Avoidance – VOC]

2.2 The Permittee shall not discharge, or cause the discharge into the atmosphere, from the entire facility, any single hazardous air pollutant (HAP) in an amount equal to or exceeding 10 tons during any twelve consecutive month period, or any combination of such listed pollutants in an amount equal to or exceeding 25 tons during any twelve consecutive month period.
[Title V Avoidance – HAP]

2.3 The Permittee shall not discharge, or cause the discharge, into the atmosphere, from all process equipment, any gases which exhibit visible emissions, the opacity of which is equal to or greater than 40 percent, unless otherwise specified.
[391-3-1-.02(2)(b)1.]

2.4 The Permittee shall not discharge or cause the discharge into the atmosphere from any emission source, particulate matter (PM) in total quantities equal to or exceeding the allowable rate as calculated using the applicable equation below, unless otherwise specified in this Permit:
[391-3-1-.02(2)(e)]

a. $E = 4.1P^{0.67}$; for process input weight rate up to and including 30 tons per hour;

b. $E = 55\ P^{0.67}-40$; for process input weight rate in excess of 30 tons per hour.

Where E equals the allowable particulate emission rate, in pounds per hour and P equals the process input weight rate in tons per hour.

2.5 The Permittee shall not burn any fuel other than natural gas at the facility.
[391-3-1-.03(2)(c) and 391-3-1-.02(2)(g) (subsumed)]

3. Fugitive Emissions

3.1 The Permittee shall take all reasonable precautions with any operation, process, handling, transportation, or storage facilities to prevent fugitive emissions of air contaminants.

4. Process & Control Equipment

4.1 Routine maintenance shall be performed on all air pollution control equipment. Maintenance records shall be in a form suitable for inspection or submittal to the Division and shall be maintained for a period of five (5) years from date of entry.
[391-3-1-.02(6)(b)1(i)]

4.2 The Permittee shall maintain the Regenerative Thermal Oxidizer (RTO1) and operate as necessary to ensure compliance with the emission limits specified in Conditions 2.1 and 2.2. When the Regenerative Thermal Oxidizer (RTO1) is in operation, the Permittee shall operate RTO1 with the combustion zone temperature at or above the minimum temperature set point established during the most recent performance test. Before the initial VOC destruction efficiency performance test is conducted on RTO1, the minimum combustion zone temperature set point is 1,500°F.
[391-3-1-.02(6)(b)1(i)]

4.3 The facility must do the following when RTO1 was not operating as allowed per Condition 4.2 while the presses are in operation:

a. Keep a log of all periods when RTO1 was not operating documenting the start and end times of those events.

5. Monitoring

5.1 The Permittee shall install, calibrate, maintain, and operate a system to continuously monitor and record the indicated pollutants on the following equipment. Each system shall meet the applicable performance specification(s) of the Division's monitoring requirements.
[391-3-1-.02(6)(b)1]

a. A temperature indicator for the measurement of the combustion zone temperature of the regenerative thermal oxidizer (ID No. RTO1). The temperature monitoring device shall have an accuracy of ±2% (°F). This data shall be used to calculate hourly averages of combustion zone temperature in RTO1. The hourly averages shall be used to calculate the 3-hour rolling average.

5.2 The Permittee shall install, calibrate, maintain, and operate monitoring devices for the measurement of the indicated parameters on the following equipment. Data shall be recorded at the frequency specified below. Where such performance specification(s) exist, each system shall meet the applicable performance specification(s) of the Division's monitoring requirements.
[391-3-1-.02(6)(b)1]

a. Pressure differential across the enclosure for each press (ID No. P1, P2, P3, and P4) operating in a permanent total enclosure. Data shall be recorded at least once per day that any one of these applicable presses is operating; or

b. Natural draft opening (NDO) face velocity for each press (ID No. P1, P2, P3, and P4) operating in a permanent total enclosure. Data shall be recorded at least once per day that any one of these applicable presses is operating.

6. Performance Testing

6.1 The Permittee shall cause to be conducted a performance test at any specified emission point when so directed by the Division. The following provisions shall apply with regard to such tests:

a. All tests shall be conducted and data reduced in accordance with applicable procedures and methods specified in the Division's Procedures for Testing and Monitoring Sources of Air Pollutants.

b. All test results shall be submitted to the Division within sixty (60) days of the completion of testing.

c. The Permittee shall provide the Division thirty (30) days prior written notice of the date of any performance test(s) to afford the Division the opportunity to witness and/or audit the test, and shall provide with the notification a test plan in accordance with Division guidelines.

d. All monitoring systems and/or monitoring devices required by the Division shall be installed, calibrated and operational prior to conducting any performance test(s). For any performance test, the Permittee shall, using the monitoring systems and/or monitoring devices, acquire data during each performance test run. All monitoring system and/or monitoring device data acquired during the performance testing shall be submitted with the performance test results.

6.2 Within 120 days after the initial startup of RTO1 that takes place after the issuance of this Permit, the Permittee shall conduct a VOC destruction efficiency (DRE) test on the Regenerative Thermal Oxidizer (RTO1). All required continuous monitoring system(s) shall be installed, calibrated, and operating when tests are conducted. To the extent possible, all presses that duct to RTO1 (ID Nos. P1, P2, P3, and P4) shall all be operated at the maximum anticipated throughput rate during the test. The results of the performance test(s) shall be submitted to the Division within sixty (60) days of the completion of testing. Should production rates increase above the rates at which the acceptable performance tests were made, the Division may require that RTO1 be tested at a higher production rate. During the tests, the Permittee shall establish the minimum combustion zone temperature using the continuous monitoring device required by Condition 5.1a. Subsequent tests shall be conducted at approximately five-year intervals not to exceed sixty-one months between tests.
[391-3-1-.02(6)(b)1]

6.3 Within 120 days after the initial startup of RTO1 that takes place after the issuance of this Permit, the Permittee shall use Method 204 of the Division's Procedures for Testing and Monitoring Sources of Air Pollutants to verify that the total enclosure housing each press (ID Nos. P1, P2, P3, and P4) is a Permanent Total Enclosure (PTE), as defined in the Method. During the performance test, the Permittee shall establish the maximum (negative) PTE pressure differential or minimum PTE natural draft opening (NDO) face velocity. The results of the verification(s) shall be submitted to the Division within sixty (60) days of such test(s).
[391-3-1-.02(6)(b)1.]

7. Notification, Reporting and Record Keeping Requirements

7.1 The Permittee shall maintain the following records for the RTO1:

a. Keep a log of all periods when the RTO1 was not operating, documenting the start and end times of those events and why the RTO1 was not operating. Maintain a record of the total hours each month of allowed RTO1 downtime.

b. Keep records of all 3-hour rolling average of the RTO1 combustion zone temperature.

7.2 The Permittee shall maintain monthly usage records of all materials used at the facility that contain volatile organic compounds (VOC) including natural gas usage. These records shall include the total weight of each material used and the VOC content of each material (expressed as a weight percentage). The Permittee may subtract from the monthly usage the volatile content of any material disposed as waste provided that the total weight, VOC content (expressed as a weight percentage), and documentation of the method for determining the VOC content of any such waste material be included as part of the record. All other calculations used to determine usages should also be kept as part of the monthly record.
[391-3-1-.02(6)(b)1.]

7.3 The Permittee shall use the following equation to calculate the amount of volatile organic compounds (VOC) emitted each month (monthly emission rate: ER_{fuel}) from natural gas usage:
[391-3-1-.02(6)(b)1.]

$$ER_{fuel}\left(\frac{lb_{VOC}}{month}\right) = \sum \quad FuelUsed\left(\frac{cubicfeet_{NG}}{month}\right) \times EF_{fuel}\left(\frac{lb_{VOC}}{cubicfeet_{NG}}\right)$$

Where:

ER_{fuel}	=	Monthly calculated Fuel usage emissions (pounds per month)
Fuel Used	=	Monthly fuel used in at the facility (cubic feet of natural gas (NG)), recorded in accordance with Condition 7.2)
EF	=	Emission factor for Natural Gas, EF = 5.5×10^{-6} lb_{VOC}/cu-ft NG

7.4 The Permittee shall use the monthly usage records required in Condition 7.2 and the RTO1 destruction efficiency from the most recent Division approved test, as applicable to materials routed to the RTO1, to calculate the total monthly VOC emissions from the printing operations, using the following equation:
[391-3-1-.02(6)(b)1.]

a. VOC_i (lbs) = Material used (lbs) * (%weight VOC); or

b. VOC_i (lbs) = Material used (gallons) * (VOC Content lbs/gallon);

c. VOC_w (lbs) = Waste Material (lbs) * (%weight VOC); or

d. VOC_w (lbs) = Waste Material (gallons) * (VOC Content lbs/gallon)

e. Total VOC (lbs) = ($\sum_{i=1}^{n} VOCi$ - $\sum_{w=1}^{n} VOCw$)

f. ER_{VOC} = Total VOC * [%DT + (1 - DRE) * (1 - %DT)] / 2,000

%DT = (T_{DT} / T_{DR}) * 100%

Where:

ER_{VOC} = Monthly VOC emission rate from the printing operations, in tons per month.
%DT = RTO1 percent down time, in percentage.
T_{DT} = Total hours per month that (1) RTO1 is not operating, recorded in accordance with Condition 7.1a., or (2) any hour during which the three-hour rolling average RTO1 combustion zone temperature is less than 50°F below the minimum combustion zone temperature set point, recorded in accordance with Condition 7.1b., or (3) any daily monitored results of Condition 5.2b. is lower than 200 ft/min or any daily pressure drop recorded in accordance with Condition 5.2a. is higher than -0.007 inch water column; in hours per month.
T_{DR} = Total operating hours per month that any coating booth(s) are in operation (non-cumulative), in hours per month.
DRE = RTO1 control efficiency, obtained in accordance with Condition 6.2, in percentage. Prior to the initial test specified in Condition 6.2, a DRE of 95 percent shall be used.
2,000 = Conversion Factor to Convert Pound into Ton.

All variables used in the calculation, including any Division-approved emission factors, or control efficiencies shall be kept as part of the monthly records.

7.5 The Permittee shall calculate the total monthly VOC emissions from the facility using records obtained in accordance with Conditions 7.3 and 7.4. The Permittee shall notify the Division in writing if the total VOC emissions from the facility exceed 8.33 tons during any calendar month. This notification shall be postmarked by the fifteenth day of the following month and shall include an explanation of how the Permittee intends to maintain compliance with the emission limit in Condition 2.1.
[391-3-1-.02(6)(b)1.]

7.6 The Permittee shall use the calculations required by Condition 7.5 to determine the total VOC emissions from the entire facility for each twelve consecutive month period. A twelve- month total shall be defined as the sum of the current month's total plus the totals for the previous eleven consecutive months. The Permittee shall notify the Division in writing if the total VOC emissions equal or exceed 100 tons during any twelve consecutive month period. This notification shall be postmarked by the fifteenth day of the following month and shall include an explanation of how the Permittee intends to attain future compliance with the emission limit in Condition 2.1.
[391-3-1-.02(6)(b)1.]

7.7 The Permittee shall maintain monthly usage records of all materials used at the facility that contain one or more listed hazardous air pollutants (HAP) including natural gas usage. These records shall include the total weight of each material used and the amount of each listed HAP contained in each material (expressed as a weight percentage). The Permittee may subtract from the monthly usage the individual HAP content of any material disposed as waste provided that the total weight, the individual HAP content (expressed as a weight percentage), and documentation of the method for determining the individual HAP content of any such waste material be included as part of the record. All other calculations used to determine usages should also be kept as part of the monthly record.
[391-3-1-.02(6)(b)1.]

7.8 The Permittee shall use the following equation to calculate the amount of hazardous air pollutants (HAP) emitted each month (monthly emission rate: ER_{fuel}) from natural gas usage:
[391-3-1-.02(6)(b)1.]

$$ER_{fuel}\left(\frac{lb_{HAP}}{month}\right) = \sum \quad FuelUsed\left(\frac{cubicfeet_{NG}}{month}\right) \times EF_{fuel}\left(\frac{lb_{HAP}}{cubicfeet_{NG}}\right)$$

Where:

ER_{fuel}	=	Monthly calculated Fuel usage emissions (pounds per month)
Fuel Used	=	Monthly fuel used in at the facility (cubic feet of natural gas (NG)), recorded in accordance with Condition 7.7)
EF	=	Emission factor for each hazardous air pollutant as found in U.S. EPA AP-42 Chapter 1.4, in lb/cu-ft natural gas.

7.9 The Permittee shall use the records required by Condition 7.7 to determine the total hazardous air pollutant emissions from the entire facility for each twelve consecutive month period, using the following equation:
[391-3-1-.02(6)(b)1.]

a. HAP_i (lbs) = Material used (lbs) * (%weight HAP); or

b. HAP_i (lbs) = Material used (gallons) * (HAP Content lbs/gallon);

c. HAP_w (lbs) = Waste Material (lbs) * (%weight HAP); or

d. HAP_w (lbs) = Waste Material (gallons) * (HAP Content lbs/gallon)

e. Total Individual HAP (lbs) = $\left(\sum_{i=1}^{n} HAPi - \sum_{w=1}^{n} HAPw \right)$

f. ER_{HAP} = Total Individual HAP * [%DT + (1 - DRE) * (1 - %DT)] / 2,000

%DT = (T_{DT} / T_{DR}) * 100%

Where:

ER_{HAP} = Monthly Individual HAP emission rate from the entire facility, in tons per month

%DT = RTO1 percent down time, in percentage.

T_{DT} = Total hours per month that (1) RTO1 is not operating, recorded in accordance with Condition 7.1a., or (2) any hour during which the three-hour rolling average RTO1 combustion zone temperature is less than 50°F below the minimum combustion zone temperature set point, recorded in accordance with Condition 7.1b., or (3) any daily monitored results of Condition 5.2b. is lower than 200 ft/min or any daily pressure drop recorded in accordance with Condition 5.2a. is higher than -0.007 inch water column; in hours per month.

T_{DR} = Total operating hours per month that any coating booth(s) are in operation (non-cumulative), in hours per month.

DRE = RTO1 control efficiency, obtained in accordance with Condition 6.2, in percentage. Prior to the initial test specified in Condition 6.2, a DRE of 95 percent shall be used.

2,000 = Conversion Factor to Convert Pound into Ton

All variables used in the calculation, including any Division-approved emission factors, or control efficiencies shall be kept as part of the monthly records.

7.10 The Permittee shall calculate the total individual and combined HAP emissions from the facility using records obtained in accordance with Conditions 7.8 and 7.9. The Permittee shall notify the Division in writing if the emissions of any individual hazardous air pollutant exceed 0.83 tons, (or one-twelfth of any lesser quantity for a single hazardous air pollutant that the U.S. EPA may establish by rule), or if emissions of all listed hazardous air pollutants combined exceed 2.08 tons, during any calendar month. This notification shall be postmarked by the fifteenth day of the following month and shall include an explanation of how the Permittee intends to maintain compliance with the emission limit in Condition 2.2.
[391-3-1-.02(6)(b)1.]

7.11 The Permittee shall use the calculations required by Condition 7.10 to determine the total hazardous air pollutant emissions from the entire facility for each twelve consecutive month period. The Permittee shall notify the Division in writing if, during any twelve consecutive month period, the emissions of any individual hazardous air pollutant equal or exceed 10 tons, or if the emissions of all listed hazardous air pollutants combined equal or exceed 25 tons. This notification shall be postmarked by the fifteenth day of the following month and shall include an explanation of how the Permittee intends to attain future compliance with the emission limit in Condition 2.2.
[391-3-1-.02(6)(b)1.]

8. Special Conditions

8.1 At any time that the Division determines that additional control of emissions from the facility may reasonably be needed to provide for the continued protection of public health, safety and welfare, the Division reserves the right to amend the provisions of this Permit pursuant to the Division's authority as established in the Georgia Air Quality Act and the rules adopted pursuant to that Act.

8.2 The Permittee shall calculate and pay an annual Permit fee to the Division. The amount of the fee shall be determined each year in accordance with the "Procedures for Calculating Air Permit Application & Annual Permit Fees."

8.3 All Georgia Air Quality Permits previously issued to this facility, including Air Quality Permit No. 2759-313-0072-S-07-0 and its amendments, are hereby revoked in their entirety.